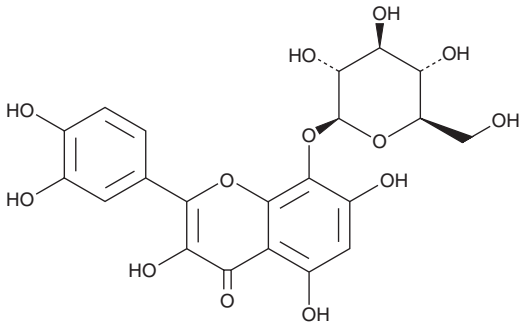
PRODUCT INFORMATION

Gossypin

Item No. 34142

CAS Registry No.:	652-78-8
Formal Name:	2-(3,4-dihydroxyphenyl)-8-(β-D-glucopyranosyloxy)-3,5,7-trihydroxy-4H-1-benzopyran-4-one
Synonym:	Gossypetin-8-O-glucoside
MF:	$C_{21}H_{20}O_{13}$
FW:	480.4
Purity:	≥95%
UV/Vis.:	λ_{max}: 262, 382 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Hibiscus vitifolius*



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Gossypin is supplied as a solid. A stock solution may be made by dissolving the gossypin in the solvent of choice, which should be purged with an inert gas. Gossypin is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of gossypin in DMSO and DMF is approximately 25 and 30 mg/ml, respectively.

Gossypin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, gossypin should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Gossypin has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Gossypin is a flavonoid glycoside originally isolated from *H. vitifolius* that has diverse biological activities.[1-5] It inhibits RANKL-induced osteoclastogenesis in RAW 264.7 cells when used at a concentration of 5 µM.[1] Gossypin inhibits Aurora B kinase (IC_{50} = 11.07 µM in a cell-free assay using the human enzyme), as well as Aurora A kinase and p90 ribosomal S6 kinase 2 (RSK2) at 20 µM.[2,3] It induces cell cycle arrest at the G_2/M phase and apoptosis in HGC-27 gastric cancer cells.[3] Gossypin decreases lactate dehydrogenase (LDH) release induced by the glutathione-depleting agent D,L-buthionine-(S,R)-sulfoximine (Item No. 23691) in primary rat cortical cells (IC_{50} = 7.4 µg/ml).[4] It reduces acetic acid-induced writhing in mice, an effect that can be reversed by the opioid antagonist naloxone, in a dose-dependent manner.[5]

References

1. Kunnumakkara, A.B., Nair, A.S., Ahn, K.S., *et al. Blood* **109(12)**, 5112-5121 (2007).
2. Jung, Y., Shin, S.Y., Yong, Y., *et al. Chem. Biol. Drug Des.* **85(5)**, 574-585 (2015).
3. Wang, L., Wang, X., Chen, H., *et al. Phytother. Res.* **33(3)**, 640-650 (2019).
4. Yoon, I., Lee, K.H., and Cho, J. *Arch. Pharm. Res.* **27(4)**, 454-459 (2004).
5. Viswanathan, S., Sambantham, P.T., Reddy, K., *et al. Eur. J. Pharmacol.* **98(2)**, 289-291 (1984).

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